



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/574,461	11/30/1995	ANTHONY D. BARONE	16528X-0155-	6825
28315	7590	04/06/2004	EXAMINER	
BANNER & WITCOFF LTD., ATTORNEYS FOR AFFYMETRIX 1001 G STREET, N.W. ELEVENTH FLOOR WASHINGTON, DC 20001-4597			PONNALURI, PADMASHRI	
			ART UNIT	PAPER NUMBER
			1639	
DATE MAILED: 04/06/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<p><b>Application No.</b></p> <p>08/574,461</p>	<p><b>Applicant(s)</b></p> <p>BARONE ET AL.</p>	
	<p><b>Examiner</b></p> <p>Padmashri Ponnaluri</p>	<p><b>Art Unit</b></p> <p>1639</p>	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12/5/03.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 and 10-56 is/are pending in the application.
- 4a) Of the above claim(s) 16-36 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8, 37 and 39 is/are allowed.
- 6) ☒ Claim(s) 10, 40-56 is/are rejected.
- 7) ☒ Claim(s) 11-15 and 38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 1995 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| <p>1) <input type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br/> Paper No(s)/Mail Date _____</p> | <p>4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br/> Paper No(s)/Mail Date: <u>4/1/04</u></p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input type="checkbox"/> Other: _____</p> |
|---|--|

Art Unit: 1639

### DETAILED ACTION

1. The amendment and response filed on 12/5/03 has been fully considered and entered into the application.

#### *Status of Claims*

2. Claims 1-8, 10-56 are currently pending in this application. Claim 9 has been canceled by the amendment filed on 10/9/98.

*[Note that the previous amendments and responses filed in this application state that claims 1-15 and 37-38 were currently pending in this application. The list of pending claims filed on 2/9/98 listed claims 1-15, 37-38 only. Originally claims 1-36 were present in this application. Claims 1-15 were elected without traverse to examine in this application by the response filed on 5/5/97. Examiner in the office action filed on 8/5/97 has withdrawn the non-elected claims 16-36.]*

3. Claims 16-36 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper filed on 5/5/97.

4. This application contains claims 16-36 are drawn to an invention nonelected without traverse in Paper filed on 5/5/97. A complete reply to the final rejection must include cancellation of nonelected claims.

5. Claims 1-8, 37-56 are currently being examined in this application.

***Withdrawn Claim Rejections***

6. The written description and scope enablement rejections of claims 1-8, 10-15, 37-39 has been withdrawn since the claims recite specifically the polymers are nucleotides, nucleosides, phosphoramidites, carbohydrates, or natural or synthetic amino acids.
7. The following 35 USC. 112, second paragraph rejections have been withdrawn:
  - a) The rejection of claim 1 and 40 as being indefinite by not reciting all the method steps has been withdrawn in view of applicant's response.
  - b) The antecedent basis rejections of claims 2-5 have been withdrawn in view of amendments to claim 39.
  - c) The rejection of claims 10 and 50 has been withdrawn in view of amendment to the claims.
8. The art rejections of record of claims 1-8, 10-15, 37-56 over Holmes et al and Brennan et al have been withdrawn in view of applicant's response.
9. The obviousness-type double patenting rejection of claims 1-8, 10-15, 37-56 over claims of US Patent 6,576,425 has been withdrawn in view of the Terminal Disclaimer filed on 12/5/03.

***Maintained Claim Rejections***

10. The written description rejection and scope enablement rejections of claims 40-56, for the reasons of record have been maintained.

***Claim Rejections - 35 USC § 112***

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Art Unit: 1639

12. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 10 recites 'synthesizing a preselected array of diverse polymers biological polymers on solid support by a first synthesis protocol.... Wherein the diverse biological polymers comprise nucleotides .....synthetic amino acids...; ii) synthesizing a preselected array of diverse polymers biological on solid support by a second synthesis protocol...', however the claim does not recite whether the polymers synthesized in the first protocol and second protocol are the same kind of polymers or different. Since the method is drawn to measuring the effect of altering a polymer synthesis protocol, both the synthesis protocols should be synthesizing same kind of polymers. Thus, applicants are requested to amend the claim.

### ***Response to Arguments***

13. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

14. Applicant's arguments filed on 12/5/03 regarding the written description rejection of claims 40-56 have been fully considered but are not persuasive.

Applicants argue that the specification is consistent with the breadth of the claims. And further assert that the specification in page 3-4 discloses that the method is applicable to any polymer array and synthesizing the array on solid substrate typically provides the polymer array, but the polymers of the array can also be attached to the pre-selected sites in the array.

Art Unit: 1639

Applicant's arguments have been considered and are considered as irrelevant to the instant claims, since the instant claims 40-56 method recites 'synthesizing a preselected array of diverse polymers connected to the cleavable linkers on a solid substrate...'

Applicants further assert that 'applicants provide a sufficient description of a representative number of species of polymers by actual reduction to practice.' Applicant's assertions have been considered and are not persuasive, since the disclosure of polymer (oligonucleotide or peptide or carbohydrate) is not representative of broad genus of polymer synthesis claimed by the instant claimed method. Applicants further assert that the specification in page 25 discloses 'labeling of polymers'. Applicant's arguments have been considered and are not persuasive since the 'methods of labeling of polymers such as oligonucleotides or peptides' is not the claimed method drawn to. The instant claim methods are drawn to 'synthesizing a reselected array of polymers connected to cleavable linkers, whereby the diverse polymers occupy different regions of solid substrate, and are spatially defined...' The specification neither disclosed nor provided sufficient guidance on how the non biological polymers are synthesized on the solid support such a way that spatially defined polymer array is obtained. Thus, the rejections of claims has been maintained for the reasons of record.

15. Applicant's arguments filed on 12/5/03, regarding the scope enablement rejection of claims 40-56 have been fully considered but they are not persuasive.

Applicants argue that the specification provides guidance in that the polymers added to the array may be previously synthesized polymers or even commercially available. Applicants arguments have been considered and are not persuasive because the instant claims recite 'synthesizing a preselected array of polymers connected to cleavable linkers on a solid

Art Unit: 1639

support...’, thus the claimed method is interpreted as polymers are synthesized on the solid substrate.

Applicant’s arguments regarding ‘Green et al disclosure’ have been considered and are not persuasive because it is not clear how the protecting groups disclosed by Green et al are used in the claimed method of diverse polymer array (other than the biological polymers) synthesis.

Applicants assert that the specification has sufficient working examples of the claimed method in examples 1-2, pages 41-50. However this is not persuasive, since the specification pages 41-50 disclose oligonucleotide or peptide array synthesis, which does not include any other polymer array synthesis according to the instant claim. Thus, the rejections of record have been maintained for the reasons of record.

***Allowable Subject Matter***

16. Claims 1-8, 37 and 39 are allowed.
17. Claims 11-15 and 38 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
18. Claim 10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

*Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Padmashri Ponnaluri whose telephone number is 571-272-0809. The examiner is on Increased Flex Schedule and can normally be reached on Monday through Friday between 7 AM and 3.30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on 571-272-0811. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Art Unit: 1639

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Padmashri Ponnaluri  
Primary Examiner  
Art Unit 1639

Pp  
02 April 2004

  
**PADMASHRI PONNALURI**  
**PRIMARY EXAMINER**

Ø.